devices for providing point-of-sale authorization for transactions involving credit cards, charge cards, debit cards and/or other currency or "smart" cards. The point-of-sale terminal **102** may be utilized at the location of the goods and/or service provider, such as the retail store or office, automated teller machine, and/or a self-serve vendor location, for example a gas pump or vending machine.

[**0026**] Typically, the terminals and devices for providing point-of-sale authorization comprise and utilize a magnetic card reader and/or magnetic strip card reader, for reading data from transaction cards. The point-of-sale terminal **102** transmits an authorization request which may include the data pertaining to the particular card utilized in the transaction and the amount of the transaction, over a communications medium, to a central processing computer for processing the transaction request and/or the authorization request pertaining thereto.

[**0027**] The point-of-sale terminal **102** also receives the authorization and/or authorization data and/or information from the central processing computer **104**. A printed transaction receipt may also be provided at and/or obtained via the point-of-sale terminal **102**, or peripheral device associated therewith, for printing a transaction receipt which is usually or typically signed by the card holder in completing the transaction. The point-of-sale terminal **102** may be designed to read other data besides and/or in addition to magnetic card data. The point-of-sale terminal **102** may also comprise, or have associated therewith, a keypad for the manual entry of transaction information and/or data, such as the amount of the transaction. The point-of-sale terminal **102** may also be an integral component of a cash register or other transaction terminal or device which may provide for the automatic entry of transaction information and/or data.

[**0028**] The central processing computer **104** may service any predefined group of cardholders. For example, the central processing computer **104** may handle all MASTERCARD transactions for a given financial and/or credit institution. The central processing computer **104**, for example, may process transaction cards such as, credit cards, charge cards, debit cards, and/or currency or "smart" cards and/or combinations of same, for example, VISA, MASTERCARD, and/or AMERICAN EXPRESS cards and process and/or mange account information pertaining thereto. The central processing computer **104** may also process accounts for any of the various banks and/or financial institutions which issue and/or manage credit cards, charge cards, debit cards and/or currency or "smart" cards (hereinafter referred to as "card" or "cards") and/or process or manage these accounts.

[**0029**] The central processing computer **104** may be a mainframe computer, a mini-computer, a micro-computer, a server computer, such as those utilized in conjunction with on-line services and/or in a network environment, and/or any other suitable computer or computer system.

[**0030**] In the preferred embodiment, the point-of-sale terminal **102** is linked and/or connected to the central processing computer **104** via a telecommunications system, link and/or medium (hereinafter referred to as "communications system") such as, for example, a telephone network or line. It is important to note that the communications system which is utilized may be any communications system and may include telecommunication systems, satellite communications systems, radio communication systems, digital communications systems, digital satellite communications systems, personal communications services (PCS) communication systems, as well as any other appropriate communications system. The point-of-sale terminal **102** transmits signals and/or data to the central processing computer **104** as well as receives signals and/or data from the central processing computer **104**.

[**0031**] The network shown in **FIG. 1** also comprises a cardholder communication device **112** which may receive signals and/or data from the point-of-sale terminal **102** and/or the central processing computer **104**. Communication device **112** has a device ID **114** associated therewith. In the preferred embodiment of **FIG. 1**, the communication device **112** receives signals and data from the central processing computer **104** with said signals being transmitted via a suitable communication system **110**. In the preferred embodiment, the communications system **110** utilized for transmitting signals and/or data to the communication device **112** is a wireless telephone line and the communication device **112** is a telephone signal receiving device such as a telephone beeper or pager. The communication device **112** or pager receives the wireless telephone signals and/or data from the central processing computer **104** during the authorization procedure as will be described in more detail below.

[**0032**] In the preferred embodiment, the communication device **112** is also equipped with a transmitter for transmitting signals and/or data to the central processing computer **104**. In this regard, the central processing computer **104** transmits signals and/or data to the communication device **112** as well as receives signals and/or data from the communication device **112**. The communication device **112** may also transmit signals and/or data directly to the point-of-sale terminal **102** and receive signals and/or data directly from the point-of-sale terminal **102**. In the preferred embodiment, the point-of-sale terminal **102** transmits signals and/or data to the central processing computer **104** and receives signals and/or data from the central processing computer **104**. Further, in the preferred embodiment, the communication device **112** receives signals and/or data from the central processing. computer **104** and transmits signals and/or data to the central processing computer **104**.

[**0033**] In particular, the communication device **112** is adapted to transmit its physical location to the central computer. Communication device **112** may contain a Global Positioning System (GPS) device, whereby the device **112** can transmit its location to the central processing computer **104**. Alternatively, the communication device **112** may be a telephone or pager which is part of a communication system equipped with location capabilities such as Enhanced 911. In this instance, the communication system is capable of determining the location of the device **112** and sending this information to the central computer **104**.The merchant's location may be verified through the vendor ID that is typically transmitted to the central computer **104** along with the transaction information. In the case where the account holder is purchasing goods or services with a vendor over the phone or via the Internet, the merchant location information can be changed to the location of the account holder, such that the two locations will match. To effect the change in merchant location, the account holder may enter a unique character string or code to notify the central computer **104**,